STATE OF CALIFORNIA
CALIFORIA REGIONAL WATER QUALTIY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-8494
FOR
BOEING REALTY CORPORATION
FORMER C-6 FACILITY, BUILDING 2

ORDER NO. R4-2002-0030 (Series 007)
FILE NO. 95-036

The Discharger shall implement this monitoring and reporting program on the effective date of this Order.

I. GROUNDWATER MONITORING PROGRAM

During the second week of the pilot test, samples will be taken from four amendment point locations (IRZ-2, IRZ-37, IRZ-95, and IRZ-C10) (See Figure 1) and shall be analyzed for total organic carbon, oxidation-reduction potential, dissolved oxygen, and pH solely for process monitoring purposes.

The following groundwater wells and amendment points will be included in the Building 2 Area sampling program. Because there are differing sampling schedules, there are four group designations for the points to be sampled. Groundwater well and amendment point locations are shown in attached Figure 1. For groundwater flow direction (see Figure 2).

Group A: IRZ-BMW-1 (upper and lower)[1], IRZ-BMW-3 (upper and lower), CMW0026, IRZ-2, IRZ-37, IRZ-95, and IRZ-C10
Group B: IRZ-BMW-2 (upper and lower)[1]
Group C: IRZ-BMW-4 (upper and lower)[1], CMW001, CMW002, IRZ-CMW2
Group D: IRZ-CMW1

Group A sampling points are either amendment points or wells within the injection radius. The Group B point is at the edge of the radius of influence of an injection point. Group C points are downgradient sample locations, and Group D is an upgradient point.

Baseline sampling will take place prior to injection. The required constituents to be analyzed and the monitoring schedule for each sample group for the **first 9 months** of the pilot test are shown below.

[1] Wells IRZ-BMW-1 through 4 are dual-nested wells.

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Daily Injections	Liters	Measurement	Per injection
Groundwater Elevation	Feet, below ground surface (bgs)	In situ	Group A: Baseline and Weeks 2*, 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Dissolved Oxygen	mg/l	grab	Group A: Baseline and Weeks 2*, 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Oxidation-Reduction Potential	Millivolts	grab	Group A: Baseline and Weeks 2*, 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
pH	pH units	grab	Group A: Baseline and Weeks 2*, 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Temperature	Degrees C	grab	Group A: Baseline and Weeks 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Specific Conductance	MS/cm	grab	Group A: Baseline and Weeks 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Ferrous Iron, hydrogen sulfide, sulfides (field test)	mg/l	grab	Group A: Baseline and Weeks 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Chlorinated Volatile Organic Compounds (EPA Method 8260B)	µg/l	grab	Group A: Baseline and Weeks 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Total Organic Carbon (EPA Method 9060 Modified)	mg/l	grab	Group A: Baseline and Weeks 2*, 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Total Metals (Fe/Mn) and nitrite and chloride	µg/l	grab	Groups A, B, D:Baseline and Week 21 Group C: Baseline and Weeks 21 and 36
Dissolved Manganese	mg/l	grab	Group A: Baseline and Weeks 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Sulfate and nitrate	mg/l	grab	Group A: Baseline and Weeks 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Dissolved oxygen, Carbon dioxide, Nitrogen, Methane, Ethene, Ethane	mg/l	grab	Group A: Baseline and Weeks 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21
Bromide	mg/l	grab	Group A: Baseline and Weeks 2*, 6, 12, 16, and 21 Group B: Baseline and Weeks 12, 16, and 21 Group C: Baseline and Weeks 12, 21, and 36 Group D: Baseline and Weeks 6, 12, and 21

*During Week 2 of the pilot test, samples will be taken from Group A locations IRZ-2, IRZ-37, IRZ-95, and IRZ-C10

Once the sampling for the initial 9 months have been completed, all sampling locations (IRZ-BMW-1, IRZ-BMW-2, IRZ-BMW-3, IRZ-BMW-4, CMW001, CMW002, CMW0026, IRZ-CMW1, IRZ-CMW2, IRZ-2, IRZ-37, IRZ-95, and IRZ-C10) will be sampled quarterly. Beginning October 2004, wells will be sampled according to the schedule below:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Groundwater Elevation	Feet, below ground surface (bgs)	In situ	Quarterly
Dissolved Oxygen	mg/l	grab	Quarterly
Oxidation-Reduction Potential	Millivolts	grab	Quarterly
pH	pH units	grab	Quarterly
Temperature	Degrees C	grab	Quarterly
Specific Conductance	MS/cm	grab	Quarterly
Ferrous Iron, hydrogen sulfide, sulfides (field test)	mg/l	grab	Quarterly
Chlorinated Volatile Organic Compounds (EPA Method 8260B)	µg/l	grab	Quarterly

All groundwater monitoring reports must include, at minimum, the following:

a. Well identification, date and time of sampling;
b. Sampler identification, and laboratory identification;
c. Quarterly observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

II. AMENDMENT INJECTION MONITORING REQUIREMENTS

The reports shall contain the following information regarding injection activities:

1. Depth of injection points;

2. Quantity of amendment injected and dates injected;

3. Total amount of amendment injected.

III.REPORTING REQUIREMENTS

The first monitoring report under this Program is due by December 1, 2003. This monitoring and reporting program supercedes previous requirements stated in work plan approval letters. Monitoring reports shall be received by the dates in the following schedule.

Boeing is required to submit monthly reports for the first 3 months, and quarterly reports for the next 3 quarters. Subsequently, semi-annual monitoring reports will be submitted for each additional year for the Building 2 Area. The groundwater monitoring wells and amendment points will be gauged, sampled, and results will be reported to the Regional Water Quality Control Board (Regional Board) under the Monitoring and Reporting Program for the General Waste Discharge Requirements according to the following schedule:

Reporting Period	Sampling Month(s)	Report Due Date
October (baseline) 2003	October (baseline)	December 1, 2003
November 2003	November	December 31, 2003
December 2003	December	January 30, 2004
January – March 2004	January, February, March	April 29, 2004
April – June 2004	No sampling scheduled	July 29, 2004
July – September 2004	July	October 29, 2004
October 2004 – March 2005	October, January	April 29, 2005
April – September 2005	April, July	October 31, 2005
October 2005 – March 2006	October, January	April 28, 2006
April – September 2006	April, July	October 31, 2006

If there is no discharge or injection, during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.

The Discharger shall comply with requirements contained in Section G. of Order No. R4-2002-003 "Monitoring and Reporting Requirements" in addition to the aforementioned requirements.

Additionally, Boeing is required to submit a final report by March 30, 2007 before a full scale bioremediation project can be implemented.

IV. CERTIFICATION STATEMENT

Each report shall contain the following completed declaration:

> "I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.
>
> Executed on the _____day of _____ at _____.
>
> _____(Signature)
>
> _____(Title)"

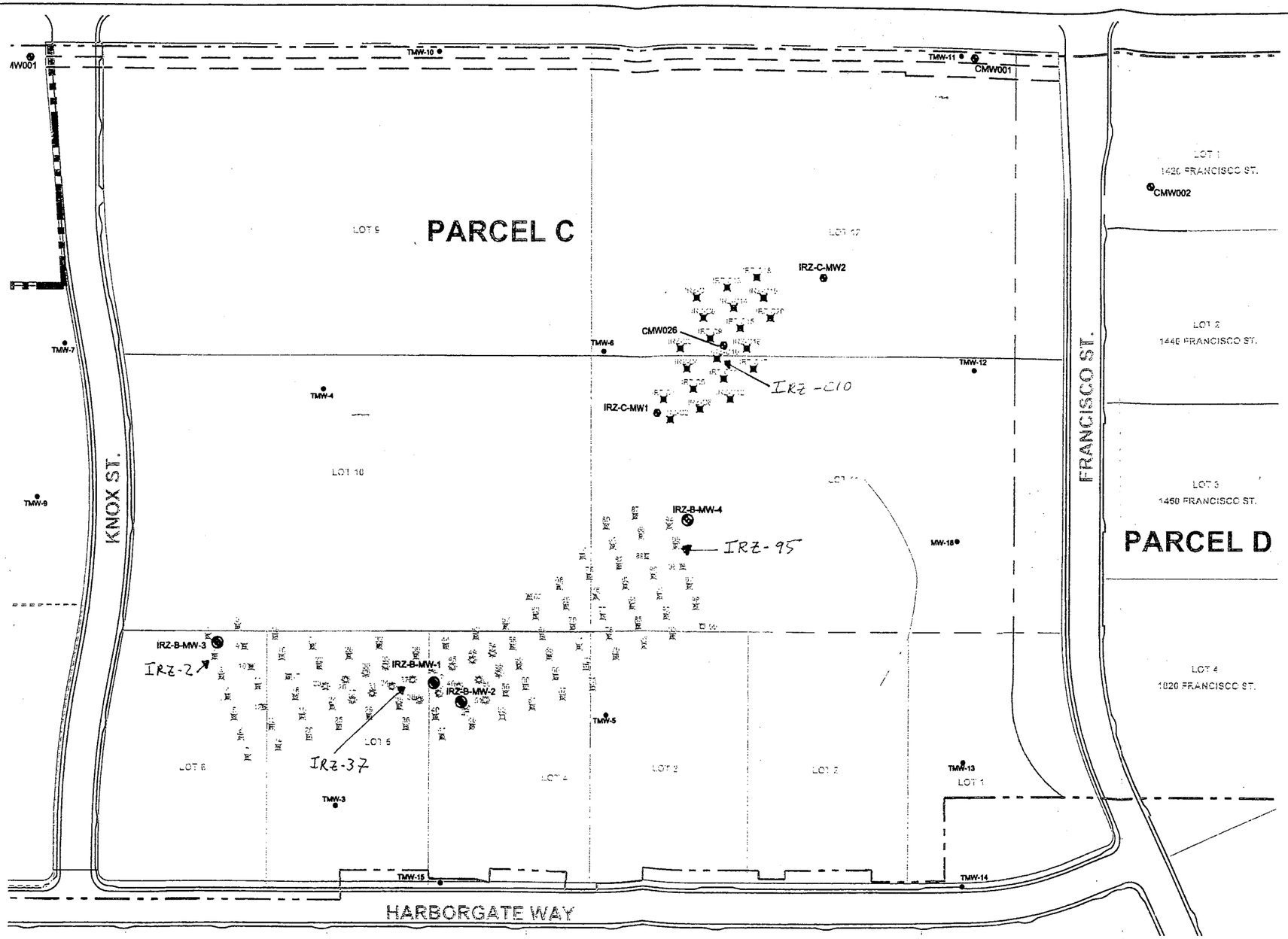
V. MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

These records and reports are public documents and shall be made available for inspection during normal business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

Ordered by: _____ Date: February 4, 2003

Dennis A. Dickerson
Executive Officer



LEGEND

- IRZ-B-MW-4 — APPROVED MONITORING WELL
- IRZ-B-MW2 — PROPOSED C-SAND MONITORING WELL
- IRZ-52 — PROPOSED C-SAND AMENDMENT POINT
- IRZ-52 — APPROVED AMENDMENT POINT
- TMW-5 — EXISITING MONITORING WELL

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0 40 80 160

FEET

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HALEY & ALDRICH
UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

ARCADIS

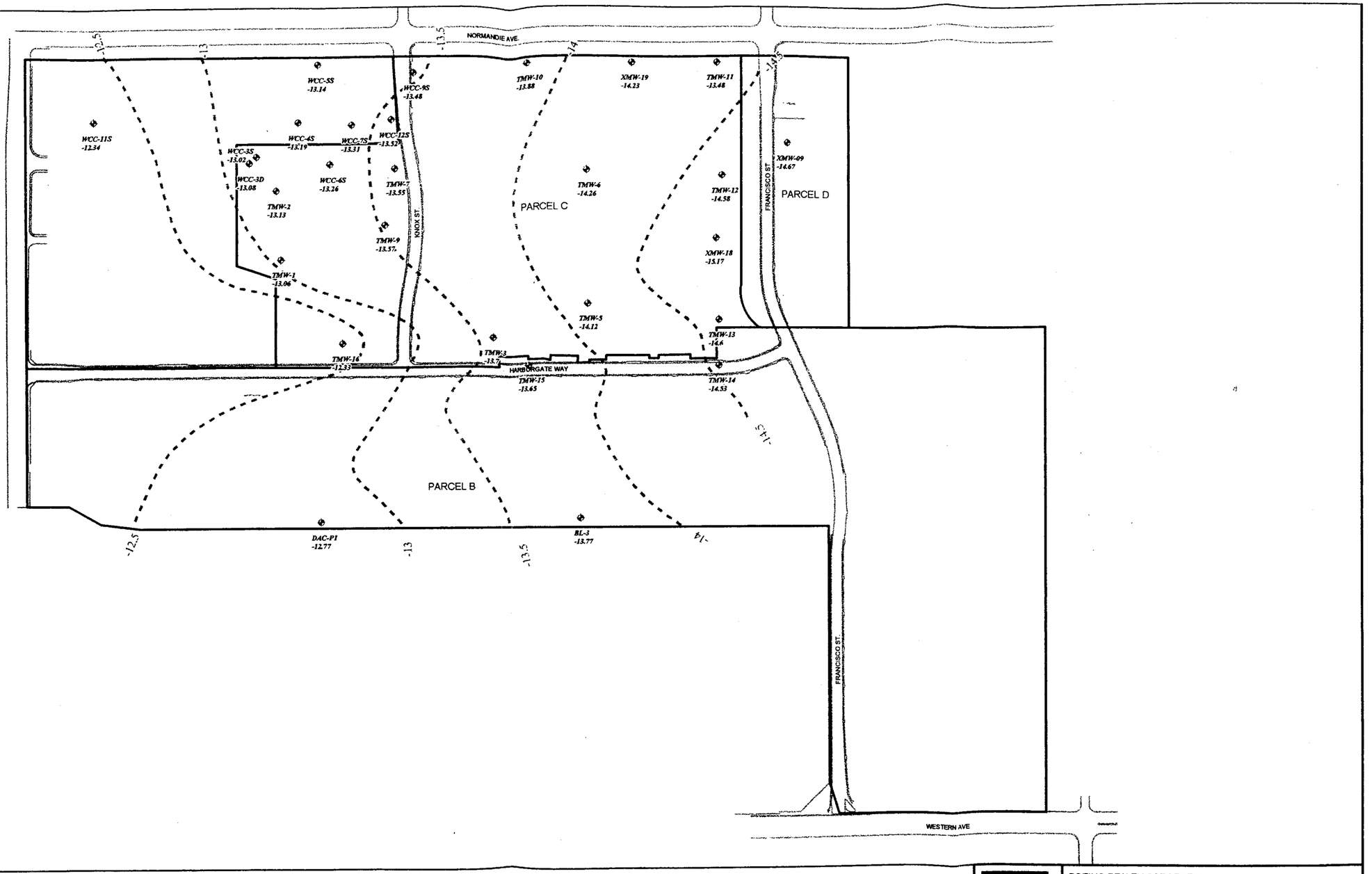
BOEING REALTY CORPORATION
FORMER C-6 FACILITY
LOS ANGELES, CALIFORNIA

FIGURE: 1

BUILDING 2 - PROPOSED IRZ AMENDMENT POINTS AND MONITORING WEL LAYOUT

SCALE: AS SHOWN | PROJECT: 28882-002
DRAWN: SAL | REVIEWED: RMF | DATE: 2 JULY 2002

BOE-C6-0102923



Legend

- TMW-1 -13.06 — Groundwater Monitoring Well with Elevation in Feet
- Parcel Boundary
- Right Of Way(ROW)
- Groundwater Elevation Contour (Feet)

Notes:

Only Measured Wells Shown

All Dimensions and Locations Approximate

0 250 500 1,000 Feet

29125-002

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FIGURE 2

GROUNDWATER ELEVATION MAP
MARCH 2002

SCALE AS SHOWN

JUNE 2002

BOE-C6-0102924